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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/729,768

12/06/2000

Keun Ok Lim

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34610 7590 10/31/2006

FLESHNER & KIM, LLP  
P.O. BOX 221200  
CHANTILLY, VA 20153

EXAMINER

OPSASNICK, MICHAEL N

ART UNIT

PAPER NUMBER

2626

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/729,768	LIM, KEUN OK	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael N. Opsasnick	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-16 and 18-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-16 and 18-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/14/2006 has been entered.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5,7-16,18-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ittycheriah et al (5452397) in view of Kimura et al (5199080).

As per claims 1,3,7,11, 12 and 24, Ittycheriah et al (5452397) teaches a method for increasing voice recognition rate in a voice recognition system comprising the steps

of establishing a reference model for user voices subjected to recognition (as enrolling phrase of the user – fig. 6);

“receiving the user voices for voice recognition commands” as speaker recognized voice command (Fig. 6, col. 3 lines 10-20, col. 5 lines 9-10\, col. 8 lines 45-51);

“detecting the range and characteristics of the received voice data” as detecting the energy base of the input voice data and determining acoustic vectors (Fig. 2)

“comparing the range.....largest similarity” as comparing the characteristics of the utterance with the stored model (col. 4 lines 52-68)

“comparing the similarity of the retrieved word.....similarity reference.....report a voice recognition failure.....report a voice recognition success.....reference value” searching for the best word based on the models loaded, returning the best model and a score, determining if it is a match or not (Fig. 3; fig. 6, col. 6 lines 40-67)

“modifying the characteristics.....recognition” as updating the model database for accepted phrases (col. 6 line 1-26)

Ittycheriah et al (5452397) does not explicitly teach updating the model after a successful recognition, however, Kimura et al (5199080) teaches updating the model after a successful recognition, and performing the command once and modifying the reference model with the same voice data( Kimura et al (5199080), col. 9 lines 17-50). Therefore, it would have been obvious to one of ordinary skill in the art of recognition to modify the teachings of Ittycheriah et al (5452397) with updating the models after a

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successful recognition and command performance because the new result would advantageously speed up the recognition process while improving recognition capability (Kimura et al (5199080), col. 1 lines 40-50; col. 1 lines 60-65; col. 2 lines 20-32).

As per claims 2,4,5,8,9,25, the combination of Ittycheriah et al (5452397) in view of Kimura et al (5199080) teaches extracting features for use in a HMM (Ittycheriah et al (5452397), col. 3 line 50-65).

As per claims 6,7,10-14,17,26,27, the combination of Ittycheriah et al (5452397) in view of Kimura et al (5199080) teaches the claim limitations pertaining to comparing the models to reference models, selecting the best match based on a comparison, and negatively or positively confirming a match (Ittycheriah et al (5452397), col. 6, lines 1-26; examiner notes that Ittycheriah et al (5452397) teaches replacement of the old phrase with the newly accepted phrase, and therefore, the voice model characteristics have change because the new model contains the accepted new version of the phrase and therefore the model characteristics, including the vectors, are changed)).

As per claims 15, 16, the combination of Ittycheriah et al (5452397) in view of Kimura et al (5199080) teaches phrase matching (Ittycheriah et al (5452397), col. 5 line 50 – col. 6 line 9).

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As per claims 18-23, the combination of Ittycheriah et al (5452397) in view of Kimura et al (5199080) teaches command performance prior to modification (as performing the command if there is no problem with the input speech (Ittycheriah et al (5452397), col. 3 lines 30-35), wherein the command can be a word (Ittycheriah et al (5452397), col. 6 lines 38-41).

### ***Response to Arguments***

4. Applicant's arguments filed 7/13/2006 have been fully considered but are moot in view of the new grounds of rejection. Note the application of the Kimura reference to address the new claim limitations.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Please see related art listed on the PTO-892 form.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richemond Dorvil, can be reached at (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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5/11/06

  
\_\_\_\_\_  
Michael N. Opsasnick  
Examiner  
Art Unit 2626